REMARKS

Claim 5 has been amended to correct a typographical error. Specifically, the term "chuck" in line two of claim 5 has been correct to read "puck."

In the reasons for allowance stated in Office Action dated March 1, 2004, and referred to in the Notice of Allowance dated September 22, 2004, the Examiner has characterized the semiconductor wafer support assembly recited in claims 1-43 and 53-67 as comprising a "pedestal joining ring that is low temperature brazed to a bottom surface of a composite cooling plate structure, with a bottom surface of a ceramic puck low temperature brazed to the upper surface of the cooling plate, and a pedestal is electron-beam welded to the pedestal joining ring."

The Applicant submits that although one embodiment of a semiconductor wafer support assembly has the above-recited features, other claimed embodiments of the invention are patentable over the references of record and should not be implied as having the aforementioned limitations unless explicitly claimed.

The Applicant submits that the invention of claims 1, 17, 53, 57 and 63 are:

1. (Original) A semiconductor wafer support assembly comprising:

a ceramic puck having a support surface;

a composite cooling plate structure low temperature brazed to a bottom surface of the ceramic puck;

a pedestal joining-ring, circumscribing the composite cooling plate structure and attached to the bottom surface of the ceramic puck; and

a pedestal, electron-beam welded to the pedestal joining-ring.

17. (Original) A full area temperature controlled semiconductor wafer support assembly comprising:

a ceramic puck having a wafer support surface;

a composite cooling plate structure having a diameter at least equal to the wafer support surface, said composite cooling plate structure low temperature brazed to a bottom surface of the ceramic puck;

a pedestal joining-ring attached to a bottom surface of the composite cooling plate structure; and

a pedestal, electron-beam welded to the pedestal joining-ring.

53. (Original) A method of assembling a full area temperature controlled wafer support assembly, said assembly including a ceramic puck having a support surface, and a molybdenum-containing or aluminum nitride composite cooling plate structure having a diameter at least equal to a diameter of the support surface of the ceramic puck, comprising the steps of:

disposing a gas conduit ring, a pair of cooling line rings, and a pedestal joining-ring on a bottom surface of the composite cooling plate structure;

high temperature brazing the gas conduit ring, the pair of cooling line rings, and the pedestal joining-ring to the bottom surface of the composite cooling plate structure; and

low temperature brazing a bottom surface of the ceramic puck to the composite cooling plate structure.

57. (Original) A method of assembling a wafer support assembly including a ceramic puck and a composite cooling plate structure, comprising the steps of:

high temperature brazing a gas conduit ring and a pedestal joining-ring on a bottom surface of the ceramic puck; and

low temperature brazing a bottom surface of the ceramic puck to the composite cooling plate structure.

63. (Original) A method of assembling a wafer support assembly including a ceramic puck and a composite cooling plate structure, comprising the steps of:

disposing a gas conduit ring, a pair of cooling line rings, and a pedestal joining-ring on a bottom surface of the composite cooling plate structure;

disposing a bottom surface of the ceramic puck over the composite cooling plate structure; and

low temperature brazing the gas conduit ring, the pair of cooling line rings, and the pedestal joining-ring to the bottom surface of the composite cooling plate structure, and the bottom surface of the ceramic puck to the composite cooling plate structure.

CONCLUSION

The Applicant submits that all claims remain in condition for allowance. Accordingly, swift passage to issuance is earnestly solicited.

If, however, the Examiner believes that any unresolved issues still exist, it is requested that the Examiner telephone Mr. Keith Taboada at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

Oct 29, 2004

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